

Patent Claims:

- 5 1. A digital book at least as reproducing means, in particular for reproducing text information, characterized by
- 10 a) a casing (G) adapted to be folded open and shut like a book and having at least one folding axis (A), a main part (1) and at least one secondary part (2), said parts forming together a book back part (BR),
- 15 b) a display unit (D) at least of two-part design and arranged such that the main part (1) with at least one screen (3) and the at least one secondary part (2) with at least one screen (4), in the opened condition of the casing (G), are available to the user like pages of a book, for looking at and optionally for working on as required,
- 20 c) a control unit (10) having means for receiving, storing, processing and reproducing information which may be in the form of text, image, graphical, audio and/or video information,
- 25 d) at least one operating unit (6) having operating elements for using the digital book as information receiving/processing/reproducing means,
- 30 e) an interface unit (11) for inputting and outputting information and for supplying energy, and
- f) a power supply means (12) for supplying energy to the units (D, 10, 11).
- 35 2. The digital book of claim 1, characterized in that the secondary part (2) or parts (2a, 2b) is/are designed to be electrically

09508794-060100

and/or mechanically separable from the main part (1), so that the main part (1) can be used alone.

3. The digital book of claim 1, characterized in that the interface unit (11) contains means (12, 13) for transferring information and energy.
4. The digital book of claim 3, characterized in that the interface unit (11) contains an insertion channel (5) having at least a reading means, for insertion of a PC card (5') or the like for electrical connection thereof to the interface unit (11) at least for reading the PC card (5') or the like.
5. The digital book of claim 1 or 2, characterized in that there is provided a supply unit (VE) acting as accessory means for the digital book and designed such that it has a receiving opening (VE') and a guide and supply pin (7), said digital book, in the closed condition of the casing (G), being adapted to be inserted therein by means of the guide and supply pin (7) for inputting and outputting information, for feeding energy and for storage of the digital book.
6. The digital book of any of the claims 1 to 4, characterized in that the control unit (10) having said means for receiving, storing, processing and reproducing information contains a control means comprising at least one RAM, a ROM and/or an EPROM, at least one processor CPU, at least one driver circuit TR and a bus line BL.
7. The digital book of claim 1,

characterized in that the at least one operating unit (6) contains as operating elements directional keys and function keys which can be operated for different functions individually or in combination.

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8. The digital book of claim 1, characterized in that the display unit (D) has a function for indicating the power supply status preferably on the screen of the main part (1).

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9. The digital book of claim 1 or 2, characterized in that the screen (3) or screens (3, 4) of the display unit (D) is/are flexible, that an adjustable background illumination is provided for the screen (3) or screens (3, 4), and in that the display on the screen (3) or screens (3, 4) as well as the background illumination can be turned on or off automatically as the casing (G) is folded open or shut.

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10. The digital book of claim 1 or 2, characterized in that the casing (G) is provided with a holding means for receiving a screen pen (15) for use as operating, writing, drawing and/or processing tool.

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11. A digital book, in particular for the reproduction of text and image information, comprising:

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- a) a casing (G) having a sheet-like display unit (D) with at least one flat screen (3, 4),
- b) at least one manipulation region (60h) for use by a user,
- c) said manipulation region being designed in the edge zone of the display unit (D) such that the user can execute operations with the fingers of a hand.

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09508794-060100

12. The digital book of claim 11,  
characterized in that
- 5 a) the manipulation region (60h) has provided  
therein at least two operating elements adapted  
to be actuated, and
- b) the arrangement of the operating elements adapt-  
ed to be actuated in the manipulation region  
(60h) is such that said operating elements can  
10 be actuated simultaneously with the fingers of a  
hand.
13. The digital book of claim 11 or 12,  
characterized in that the process of operation can  
be carried out by actions of the fingers of the user  
15 on the manipulation region (60h), without this ne-  
cessitating substantial shifting of the wrist of the  
user's hand relative to the casing (G).
14. The digital book of claim 11, 12 or 13,  
20 characterized in that the casing (G) within the ma-  
nipulation region (60h) has operating elements  
adapted to be operated, which are arranged on the  
side directed away from the flat screen.
- 25 15. The digital book of any of claims 11 to 14,  
characterized in that the screen (3,4) is designed  
as pressure-sensitive touchscreen at least in the  
manipulation region.
- 30 16. The digital book of claim 15,  
characterized in that the screen (3,4) is designed  
as pressure-sensitive touchscreen at least in its  
edge portion, with at least one screen corner por-  
tion or a portion located in the middle of an edge  
35 section being adapted to be operated for triggering  
specific functions.

09508794-060100

17. The digital book of any of claims 13 to 16,  
characterized in that the operating elements and/or  
the pressure-sensitive areas of the screen (3, 4)  
individually or in combination trigger
- 5     - leafing-through functions for navigating in the  
      book contents displayed,  
      - providing functions for selection menus or  
      - selection functions within selection menus pro-  
      vided.
- 10
18. The digital book of claim 17,  
characterized in that specific operating elements  
and/or pressure-sensitive areas of the screen (3, 4)  
individually or in combination, in the basic mode,  
15     are associated with a specific first functionality,  
      but immediately after triggering a providing func-  
      tion for a selection menu trigger, in a selection  
      mode, a selection function within this selection  
      menu provided.
- 20
19. The digital book of claim 17 or 18,  
characterized in that the selection menus are indi-  
cated exclusively in an edge portion of the screen,  
without covering the book contents displayed.
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20. A digital book, in particular for the reproduction  
of text and image information, comprising:
- 30     a) a casing having a sheet-like display unit (D)  
      with at least one flat screen (3, 4),  
      b) at least one manipulation region (60h) for oper-  
      ating by a user,  
      c) at least one operating element adapted to be  
      actuated, which is arranged within the manipula-  
      tion region (60h) on the side directed away from  
35     the flat screen (3, 4),

09508794-060100

d) said operating element, upon actuation, providing at least one selection menu or selecting a selection menu provided.

5 21. The digital book of claim 20,  
characterized in that the screen (3, 4) is designed  
as pressure-sensitive touchscreen at least in the  
manipulation region.

10 22. The digital book of claim 21,  
characterized in that the screen (3,4) is designed  
as pressure-sensitive touchscreen at least in its  
edge portion, with at least one screen corner por-  
15 tion or a portion located in the middle of an edge  
portion being adapted to be operated for triggering  
specific functions.

20 23. The digital book of any of claims 21 or 22,  
characterized in that the operating elements and/or  
the pressure-sensitive areas of the screen (3,4)  
individually or in combination trigger  
- leafing-through functions for navigating in the  
book contents displayed,  
- providing functions for selection menus or  
25 - selection functions within selection menus pro-  
vided.

30 24. The digital book of claim 23,  
characterized in that specific operating elements  
and/or pressure-sensitive areas of the screen (3, 4)  
individually or in combination, in the basic mode,  
are associated with a specific first functionality,  
but immediately after triggering a providing func-  
tion for a selection menu trigger, in a selection  
35 mode, a selection function within this selection  
menu provided.

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25. The digital book of claim 23 or 24,  
characterized in that the selection menus are indi-  
cated exclusively in an edge portion of the screen,  
without covering the book contents displayed.

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26. A digital book, in particular for the reproduction  
of text and image information, comprising:

- a) a casing (G) having a sheet-like display unit  
(D) with at least one flat screen (3, 4),
- 10 b) the screen (3, 4) being designed as pressure-  
sensitive touchscreen at least in the edge por-  
tion, and
- c) operation of the pressure-sensitive touchscreen  
at at least one predetermined location causing  
15 the screen to be switched over to a selection  
mode with at least one selection menu.

27. The digital book of claim 26,  
characterized in that the screen (3, 5) in the basic  
mode reproduces the book contents without selection  
20 menus.

28. A digital book, in particular for the reproduction  
of text and image information, comprising:

- 25 a) a display unit (D) having at least one screen  
(3, 4),
- b) an operating means allowing the user to carry  
out operations,
- b) a coupling means for electric coupling of a data  
30 carrier unit,
- c) said coupling means, after coupling of the data  
carrier unit, automatically reading out data  
from the data carrier unit, and
- d) both the book contents displayed on the display  
35 unit and the entirety of the operating functions

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available to the user being determined by the data read out from the data carrier unit.

- 5 29. A digital book, in particular for the reproduction of text and image information, comprising:
- a) a casing (G) having a display unit (D) with at least one screen (3, 4),
  - b) the rear side of the display unit (D) having a substantially cylindrical concave first inward curvature,
  - c) with at least one outer edge of the display unit (D) being designed as a gripping handle and being of larger thickness than the display unit in the inwardly curved region.
- 10
- 15 30. The digital book of claim 29, characterized in that at least one gripping handle contains electronic components.
- 20 31. The digital book of claim 30, characterized in that at least one gripping handle contains a power supply means.
- 25 32. The digital book of claim 29, 30 or 31, characterized in that two opposite outer edges of the display unit are designed as gripping handles.
- 30 33. The digital book of any of claims 29 to 32, characterized in that the rear side of the display unit (D) has a substantially cylindrical concave second inward curvature which is arranged perpendicularly to said first inward curvature.
- 35 34. The digital book of any of claims 29 to 33, characterized in that at least one gripping handle is provided with an electric plug means.

00508794-060100



35. The digital book of any of claims 29 to 34,  
characterized in that the rear side of the display  
unit has at least one operating element.
- 5 36. The digital book of any of claims 29 to 35,  
characterized in that the rear side of the display  
unit is compressible.
37. The digital book of any of claims 29 to 36,  
10 characterized in that the display unit is adapted to  
be bent.
38. A digital book, in particular for the reproduction  
of text and image information, comprising an elec-  
15 trical pluggable connector means for power supply  
and/or for transferring data signals from or to oth-  
er information processing systems.
39. The digital book of claim 38,  
20 characterized in that the connector means is  
arranged in the lower edge of the display means.
40. The digital book of claim 39,  
25 characterized in that the book is of two-part con-  
struction and the connector means is arranged in the  
region of the bottom side of the pivot hinge.
41. The digital book of any of claims 38 to 40,  
30 characterized in that the connector means is a jack  
plug device.
42. The digital book of claim 41,  
35 characterized in that the connector means serves as  
holding means for setting the digital book in a sup-  
ply station.

43. The digital book of claims 38 to 42,  
characterized in that the connector means is adapted  
to be used for connection with various apparatus.
- 5 44. A digital book, in particularly for the reproduction  
of text and image information, comprising a display  
unit (D) having at least one screen (3, 4), with the  
display unit being of flexible construction.
- 10 45. The digital book of claim 44,  
characterized in that the display unit is pressure-  
compressible.
- 15 46. The digital book of claim 44 or 45,  
characterized in that the display unit is adapted to  
be bent.

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